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| 09/843,095 | 04/25/2001 | Fabrice Guitton | 859063.493 | 8424 |

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EXAMINER

PHAM, TUAN

| ART UNIT | PAPER NUMBER |
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2643

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DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,095

Applicant(s)

GUITTON ET AL.

Examiner

TUAN A PHAM

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (U.S. Patent No. 6,587,560, hereinafter, "Scott") in view of Krone et al. (U.S. Patent No. 6,359,983, hereinafter, "Krone").

Regarding claim 1, Scott teaches an interface circuit (see figure 17, col.22, ln.16-36), comprising: means forming a galvanic isolation barrier between a transmission line and a user equipment (see figure 17, col.22, ln.16-36), and means for

detecting, independently from a transmission, the idle or busy state of the line, the detecting means include (see figure 17, line side circuit 118, col.24, ln.50-61):

on the line side with respect to the isolation barrier, an oscillating circuit (slave oscillator) associated with an element detecting that a voltage threshold has been exceeded and only supplying the oscillating circuit when the line state is not busy (see figure 2, slave oscillator 216, col.27, ln.1-26).

It should be noticed that Scott fails to clearly teach on the user equipment side, a circuit for detecting the amplitude of an oscillating signal provided by the oscillating circuit and having transited through the isolating means. However, Krone teaches such features (see figure 17, VCO 336, col.23, ln.1-17, col.24, ln.29-50) for a purpose of detecting signals on the telephone line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of a circuit for detecting the amplitude of an oscillating signal provided by the oscillating circuit and having transited through the isolating means, as taught by Krone, into view of Scott in order to control on-hook and off-hook of the telephone line.

Regarding claim 2, Scott further teaches the interface circuit comprising a detector of the presence of a bell signal on the line, translating as a ripple of high amplitude thereon (see figure 17, ringer circuit 1701, col.24, ln.65-67).

Regarding claim 3, Scott further teaches the interface circuit wherein the detector and the means for detecting the idle or busy state of the line share the same galvanic isolation means (see col.24, ln.50-62).

Regarding claim 4, Scott further teaches the interface circuit wherein the detector detects the exceeding of a voltage threshold on the line (see col.27, ln.1-26).

Regarding claim 5, Scott further teaches the interface circuit comprising means for modulating the supply amplitude of the oscillating circuit according to whether a bell signal is present or not on the line (see col.26, ln.23-46).

Regarding claim 6, Scott further teaches the interface circuit comprising on the equipment side, an output stage providing two logic signals for the user equipment, the two logic signals providing, in combination, three states respectively corresponding to an idle state of the line, to a busy state of the line, or to the presence of a bell signal thereon (see col.14, ln.31-59).

Regarding claim 7, Scott further teaches the interface circuit comprising a means for rectifying the signal present on the line (see figure 17, diode bridge 1606, col.22, ln.25-35).

Regarding claim 8, Scott teaches a circuit for interfacing a transmission line with user equipment (see figure 17), the circuit comprising:

a line condition detecting circuit coupled to the transmission line and configured to detect when the line is busy and not busy and to output a line condition signal (see figure 17, line side circuit 118, col.24, ln.55-61), and

an oscillator circuit coupled to the line condition detecting circuit and configured to generate an output signal in response to the line condition signal (see figure 7, slave oscillator 707, col.17, ln.1-25).

It should be noticed that Scott fails to clearly teach a detector coupled to the user equipment and configured to receive the output signal and to enable the user equipment to use the transmission line in response to the output signal. However, Krone teaches such features (see figure 17, VCO 336, col.23, ln.1-17, col.24, ln.29-50) for a purpose of detecting signals on the telephone line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of detector coupled to the user equipment and configured to receive the output signal and to enable the user equipment to use the transmission line in response to the output signal, as taught by Krone, into view of Scott in order to control on-hook and off-hook of the telephone line.

Regarding claim 9, Krone further teaches the circuit comprising a galvanic isolation circuit coupled to the transmission line and the user equipment and configured to provide galvanic isolation between the oscillator circuit and the detector circuit (see figure 17, VCO 336, col.23, ln.1-30).

Regarding claim 10, Scott further teaches the circuit wherein the oscillator circuit is configured to generate the output signal at a first level when the line condition signal indicates the transmission line is not busy and at a second level when the transmission line is busy (see col.24, ln.50-62).

Regarding claim 11, Scott further teaches the circuit further comprising a bell-detect circuit having an input coupled to the transmission line and an output coupled to the oscillator circuit, the bell-detect circuit configured to send a bell-detect signal to the

oscillator circuit in the presence of a bell signal on the transmission line (see figure 17, ringer circuit 1704, col.22, ln.36-52).

Regarding claim 12, Scott further teaches the circuit wherein the oscillator circuit is configured to generate the output signal at a third level in response to the bell-detect signal (see col.8, ln.50-59).

Regarding claim 13, Scott further teaches the circuit wherein the oscillator is configured to generate a null signal when the transmission line is busy, to generate an oscillating signal of a low level when the transmission line is idle, and to generate an oscillating signal of a high level when the transmission line is carrying a bell signal (see col.11, ln.1-25, col.24, ln.19-45).

Regarding claim 14, Scott teaches a method of interfacing a transmission line with user equipment, the method comprising:

galvanically isolating the transmission line from the user equipment (see figure 17, isolation barrier 120),

detecting the condition of the transmission line (see col.24, ln.48-61), and
generating an output signal of a first level across the galvanic isolation to the user equipment when the transmission line is not busy and of a second level when the transmission line is busy (see col.10, ln.55-67, col.11, ln.1-15).

It should be noticed that Scott fails to clearly teach detecting the output signal on the other side of the galvanic isolation. However, Krone teaches such features (see figure 17, VCO 336, col.23, ln.1-17, col.24, ln.29-50) for a purpose of detecting signals on the telephone line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of detecting the output signal on the other side of the galvanic isolation, as taught by Krone, into view of Scott in order to control on-hook and off-hook of the telephone line.

Regarding claim 15, Scott further teaches the method wherein detecting the output signal comprises generating a detect signal in response to detecting the output signal on the other side of the galvanic isolation to control the user equipment such that the user equipment accesses the transmission line when the transmission line is not busy (see col.24, ln.29-67).

Regarding claim 16, Scott further teaches the method wherein detecting the condition of the transmission line comprises detecting the presence of a bell signal on the transmission line (see figure 17, ringer circuit 1704).

Regarding claim 17, Scott further teaches the method wherein generating an output signal comprises generating an output signal of a third level in response to detection of the bell signal on the transmission line (see col.8, ln.50-59).

Regarding claim 18, Scott further teaches the method wherein generating an output signal comprises generating a null signal when the transmission line is busy, generating an oscillating signal of a low level when the transmission line is idle, and generating an oscillating signal of a high level when the transmission line is carrying a bell signal (see col.11, ln.1-25, col.24, ln.19-45).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although Rahamim et al. (U.S. Patent No. 6,647,101), Hershberger et al. (U.S. Patent No. 5,654,984), Poulis et al. (U.S. Patent No. 6,377,667), and Fischer et al. (U.S. Patent No. 6,674,857) are not applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned for supporting the system and method for providing data and voice services on the telephone line, and data access arrangement utilizing a serialized digital data path across an isolation barrier.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (703) 305-4987. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (703) 305-4708 and

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Art Unit: 2643

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Art Unit 2643

April 24, 2004

Examiner

Tuan Pham


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600